

Enterobiasis vermicularis



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Abstract

Enterobius vermicularis (pinworm) infestation is quite common, especially in children and their caregivers. Often infection is symptomless, but more often there is perianal itching due to the adult females, which lay the eggs in the perianal region. Reinfection and person-to-person transmission is common. During colonoscopy, the adult female worms can be seen in the cecum, ascending colon, or distal ileum as white worms of 8–13 mm in length. This article is part of an expert video encyclopedia.

Keywords

Colonoscopy; *Enterobiasis vermicularis*; Pinworm infestation; Standard endoscopy; Video.

Video Related to this Article

Video available to view or download at doi:10.1016/S2212-0971(13)70157-2

Technique

Colonoscopy.

Material

Olympus CF-Q180AL Video Colonoscope, Tokyo, Japan.

Background and Endoscopic Procedures

Enterobius vermicularis (pinworm) is a small nematode that occurs worldwide. Pinworm infestations are especially common in school-aged children as well as their caregivers. Prevalence is estimated to be up to 50% in children and up to 20% in adults.¹

Mature pinworms live on the mucosa of the cecum and ascending colon and in the distal small intestine. The males are 2–5-mm long, the females 8–13-mm long. Soon after copulation, the male worm dies. Female worms are able to migrate to the anus, pass the sphincter, and lay over 10 000 eggs, which are $30 \times 50 \mu\text{m}$ in size, on the perianal skin. This occurs mostly at night. The eggs have a sticky surface, which allows them to adhere not only to the skin but also to inanimate objects, such as toys and clothing.² Infection occurs by ingestion of pinworm eggs. This can result in either self-infection or person-to-person transmission. The incubation period after ingestion is 1–2 months, during which the gravid female matures in the small intestine. After maturation, the worm migrates to the colon.³

In general, pinworm infestation is harmless, although cases of pinworms migrating through the intestinal wall to the uterus, ovarian tubes, or abdominal cavity have been described. Often, pinworm infestation occurs without symptoms. The most common clinical manifestation of pinworm infection is perianal itching, which can be quite severe. Secondary bacterial infection due to scratch lesions may occur.¹ In some cases, live pinworms can be detected within the feces, or may adhere to perianal skin. The most reliable method, however, is the so-called Scotch tape method. With this method, the perianal skin is touched with transparent tape early in the morning to collect possible pinworm eggs around the anus. The eggs on the tape can be seen under a microscope.¹ The diagnostic accuracy of three consecutive tape collections is >90%. Despite the prevalence of pinworm infestation, they are not often encountered during colonoscopy. Treatment is with mebendazole, albendazole, or pyrantel pamoate.¹ Single-dose treatment should be repeated after 2 weeks because reinfection is common. Family members should be treated as well to prevent retransmission.

Key Learning Points/Tips and Tricks

- Despite its prevalence, *Enterobius vermicularis* is not frequently encountered during colonoscopy.
- Recognition of the pinworms facilitates prompt therapy.

Scripted Voiceover

Time (min:sec)	Voiceover text
00:00	These pinworms were seen in the cecum of a 41-year-old male, who was investigated because of a family history of colorectal cancer.
00:12	The worms are approximately 8 mm long and move swiftly in the mucus layer.

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- 00:23 The patient had no perianal itching and had never observed worms in his stools. The patient, his two school-aged children, as well as his wife, were treated with albendazole.
- 00:38 Despite the prevalence of pinworm infection, they are not frequently encountered during colonoscopy.
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